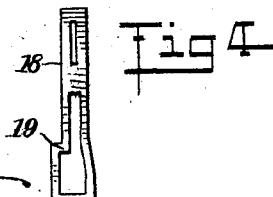
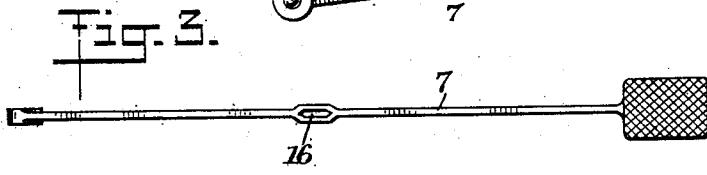
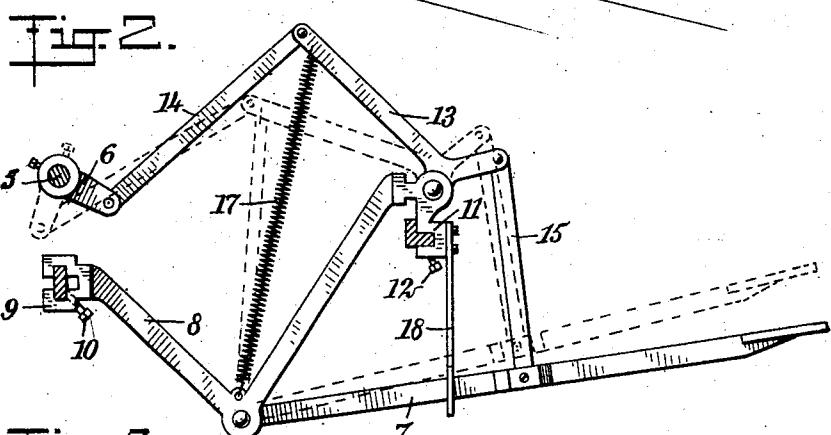
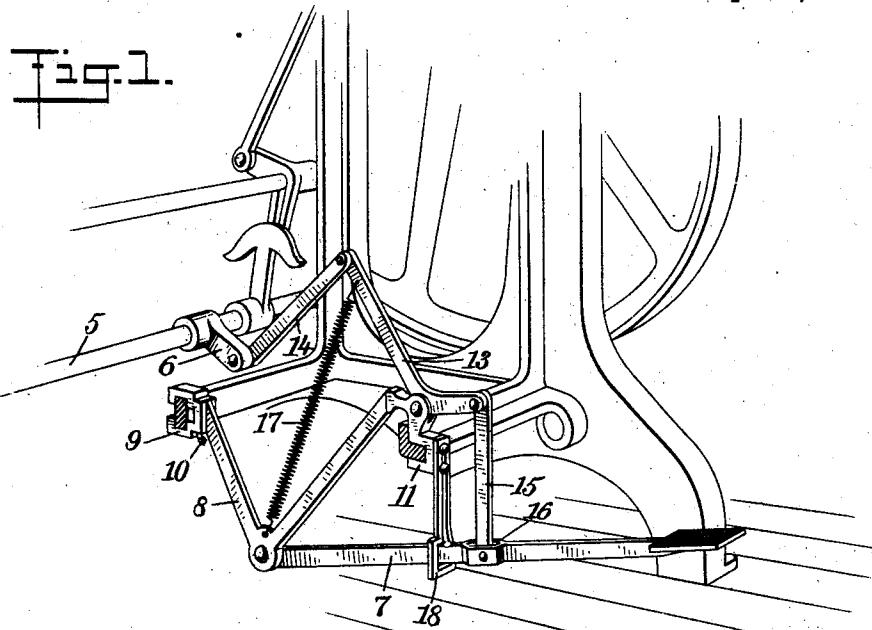


J. SPRINGER.

ACTUATING MECHANISM FOR PRINTING PRESS THROW-OFFS.
APPLICATION FILED NOV. 19, 1908.

919,084.

Patented Apr. 20, 1909.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOSEPH SPRINGER, OF SAN FRANCISCO, CALIFORNIA.

ACTUATING MECHANISM FOR PRINTING-PRESS THROW-OFFS.

No. 919,084.

Specification of Letters Patent.

Patented April 20, 1909.

Application filed November 19, 1908. Serial No. 463,342.

To all whom it may concern:

Be it known that I, JOSEPH SPRINGER, a citizen of the United States, and a resident of San Francisco, in the county of San Francisco and State of California, have invented a new and Improved Actuating Mechanism for Printing-Press Throw-Offs, of which the following is a full, clear, and exact description.

The invention is an improvement in the actuating mechanism for printing press throw-offs, and is as for its object to dispense with the conventional hand-operated lever for this purpose and provide a treadle as a substitute, whereby the operator may have the free use 15 of both hands for feeding the press.

The invention may be defined as a foot-lever, a bell-crank lever arranged above the foot-lever, links respectively connecting the arms of the bell-crank lever with the arm of 20 the throw-off shaft and the foot lever, and a spring for automatically returning the shaft and foot lever to initial position when the foot-lever is released.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 illustrates in perspective, the preferred form of my invention as applied to a 30 well-known type of printing press; Fig. 2 is a side elevation of the same showing parts of the press frame in section; Fig. 3 is a plan of the foot-lever; and Fig. 4 is a face view of the locking-plate.

The throw-off mechanism for printing presses generally embodies an oscillatory throw-off shaft 5 having an arm 6 which is operatively connected with a hand-lever, at least this is the construction of what is commonly known as the Gordon press, and for convenience of illustration I have shown my improvements applied to this type of machine. Where a hand-lever is used for controlling the throw-off, the free use of one of 45 the operator's hands at all times for feeding the press, etc. is impaired. By my invention the hand-lever is supplanted by a foot-lever 7 which is fulcrumed at its inner end on a hanger 8, the latter being adjustably secured on the connecting bars between the ends of the frame, these bars being generally of the shape shown, which necessitates a different form of clamp for each arm of the hanger. One of these clamps 9 is shown to 50 be slotted in both a horizontal and vertical plane and having a set-screw 10, and the

other clamp 11 having an offset horizontally-slotted portion provided with a clamping screw 12. The clamp 11 is bifurcated at the top for receiving and pivotally supporting 60 a bell-crank lever 13, the arms of which are respectively connected by links 14 and 15 to the arm 6 of the throw-off shaft 5 and the foot-lever 7, the connection of the link 15 with the foot-lever 7 being preferably effected 65 by providing the lever with a slot 16 intermediate its length, into which the end of the link passes. A spring 17 is connected to that end of the lever 13 adjacent to the link 14 and is also connected to the hanger 8, 70 preferably near the intersection of the arms of the latter.

Attached to the clamp 11 is a depending member or plate 18 having a slot through which the lever 7 passes, the slot being enlarged at its lower end to provide a shoulder 19, against which the top edge of the lever is adapted to engage by giving the lever a slight lateral movement. On depressing the foot-lever or treadle, the bell-crank lever 13 80 is moved in a direction to carry the throw-off arm 6 from the dotted position to the position shown in full lines in Fig. 2, and revolving the throw-off shaft in a direction to throw off the impression. If the impression 85 is to be thrown off any appreciable time, the lever is locked by moving it sidewise with the foot to engage under the shoulder 19. When placing the press again in working operation, the foot-lever is disengaged from the shoulder of the locking member, when the spring 17 automatically returns the parts to normal position, as shown in dotted lines in Fig. 2.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In a printing press, a frame having longitudinal connecting bars, a hanger adjustable on said bars, a foot lever fulcrumed to the hanger, an oscillatory throw-off shaft having an arm, a bell-crank lever fulcrumed on the hanger, and links respectively connecting the arms of the bell-crank lever to the foot-lever and to the arm of the throw-off shaft. 100

2. In a printing press, a frame having longitudinal connecting bars, a hanger having clamps adjustably attached to said bars, a foot lever fulcrumed at its inner end on the hanger, a bell-crank lever fulcrumed on one of the clamps of the hanger, a throw-off shaft 110 having an arm, links respectively connecting the arms of the bell-crank lever with the arms

of the throw-off shaft and with the foot lever, a depending member having a shoulder for locking the foot-lever in a depressed position, and a spring connected to the bell-crank lever and to the hanger for automatically returning the parts to initial inoperative position when the foot-lever is released.

3. In a printing press, a frame having longitudinal connecting bars, a hanger carried by the bars, an oscillatory throw-off shaft having an arm, a foot lever fulcrumed at its inner end to the hanger, a lever fulcrumed at

an intermediate point of its length above the foot lever, and links respectively connecting the arms of the bell-crank lever to the foot lever and to the arm of the throw-off shaft. 15

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH SPRINGER.

Witnesses:

LOUIS ARTIGUE,
FRANK S. MURRAY.